DRAFT NOTES:
Water Management Development Team Meeting – 10/21/99
1:00-4:00

AGENDA:

- **Review**
- **Scenario Development**
- **Decision Making**
- **Workplan**
- **Summary**

Summary

1. COA sensitivity will be assessed in modeling.
2. Fish population impacts and benefits will be considered to help justify actions and costs. Show limiting factors of asset benefits. Show why we can't quantify population impacts given over-riding factors and uncertainties.
3. We will consider additional scenarios.

I. Review

Expectations:

- Get feedback (data results) on scenarios.
- Have reaction to decision making structure (revised chicken foot diagram)
- Discuss adequacy of workplan

South Delta Water Management Agency Letter

- Action: Tom Zuckerman will be added to DT to represent South Delta.

II. Progress on Scenario Development

- We have gone from three scenarios in last meeting to one primary scenario that represents the DOI b(2) court decision.
- There are four scenarios being evaluated that are based on the DOI b(2) scenario:

  1) Scenario 1 - with early and late Stage 1 versions (A and B) - baseline of WQCP, EWA assets include the non-Accord b(2) water. Version A has few assets for water supply; whereas Version B has more later in Stage 1.

  2) Scenario 2 - Same as 1A but with more of limited assets to EWA.

3) Scenario 3 - Same as 1B but with unlimited EWA assets to meet fish agency bar. Objective is to meet bar, track costs, book end EWA Account approach.

4) Scenario 4 - Same 3 but early Stage 1.

Q: What are the water supply and water quality targets? R: Water quality targets have been provided to gaming team. Water supply targets have not.

Q: What about the 100 TAF of ERP water for flows? R: Late Stage 1 water purchases - will be modeled as external inflow.

Q: What are the objectives of Scenarios 3 and 4 in meeting the "bar"? R: To provide seven year assurances for ESA to allow us to proceed through Stage 1 that provide a "trajectory to recovery".

Q: Are the AFRP objectives included? R: Yes.

Q: Bookend? Where? R: Scenarios 3 and 4 will have aggressive environmental actions with expected high water supply impacts.

Q: The size of the EWA will be based on hitting the "bar"? R: Yes.

Q: Is the Friant Agreement part of meeting the "bar"? R: some overlap, but above Merced not part of CALFED.

Q: Is water for refuges part of the "bar"? R: Some overlap but refuge water is not designed to benefit the Delta.

Q: In scenarios 2-4 what does "sharing assets" mean? R: Sharing Banks, JPOD, GW storage, efficiency, etc. Sharing means about 50-50.

C: None of the scenarios were meant to be realistic and truly achievable - only meant to show how the assets work in a WMS over a range of bookends.

Q: ERP flows are also prescribed to provide pulses of Delta outflow and thus are dedicated? R: Yes.

Q: Has this been discussed by CT? R: Yes.

C: Underscores the need to identify what the "bar" is. R: Expected benefits under the "bar" is part of the adaptive management aspect of the program.

C: Concern: in past gaming we have used EWA assets to mitigate for using new assets for water supply.

III. Preliminary Scenario 1A Results

- Charts were presented.
- Biology Template presented with qualitative targets/concerns to address along with tools, status and priority evaluation.
- Our model uses some simplifying assumptions such as unlimited JPOD. We are not using COA in daily model because its slows us down and is difficult - it also constrains water supply benefits - we assume you would want to maximize water supply benefits.
- New Melones is not included in the model.
- We are working with b(2) team at DOI to accurately reflect b(2) decision.
- Daily modeling is carried through 15 years (81-95) in sequence with changes carried through.

Q: How do you grade or score performance against the targets/concerns? R: On how well we meet the identified concerns in each year.

Q: Are the significance of the concerns relative to the biological populations being assessed? R: No.

Q: Are you breaking out the beneficial and adverse impacts? R: Yes.

Q: Can you separate the SWP/CVP water supplies? R: yes, especially in DWRSIM.

Q: How are you looking at WQ in the Delta? R: Rock Sl clorides primarily, but we also qualitatively look at TOC's and the February Delta max of TOC's. We also consider bromides indirectly from the clorides.

Q: Could the Biological Templates be a guide to DOI b(2)? R: Could be.

Q: Is there another b(2) template? R: Possibly because how to use the 800 TAF per the accounting is another objective.

Q: Is salvage scaled to reflect changes in exports? R: Yes - using historical densities with some adjustment in densities for changes in X2.

C: Concern that the COA restrictions are real and that the gaming is being overly optimistic relative to effects on water supply and ability to generate EWA assets as well. R: Switching COA on will require more operation decisions in gaming and more accounting details for EWA and water supply. We would need more operator input to make these decisions. Important to consider where water goes south of the Delta when we model unlimited JPOD. Certain aspects of COA lock you in in terms of what you can do with JPOD.

Action: We will do a sensitivity analysis of effect of COA restrictions. Hopefully it will be limited so as not to slow us down.

C: Concerned that a limited analysis will not show all the problems - we should still take a post process look back at results of modeling to evaluate potential effect of not using COA restrictions.

Q: Is the model code generally available? R: Yes - Lotus spreadsheet.

Q: Why is the DOI b(2) accounting rough? R: They have no clear direction.

1981 Results Chart Present:

- 100% historical deliveries assumed. We recognize that demands have changed and deliveries are sometimes restricted. We have asked for a more realistic array of deliveries for our 15 years under present conditions but have not received them.
- We could have increased San Luis storage with upstream storage releases as there were opportunities to increase exports prior to the San Luis low point. Operators can ask us to include such actions during gaming.

Q: There appears to be significant WQ impacts in 1981 from your actions? R: Yes, clorides are higher in spring and summer.

Q: What were the demand assumptions? R: maximum historical deliveries.

C: Concern that demands would be higher than historical and you need to reflect the new demands.

Q: How do you score the biological results against your template concerns? R: How well we met the concerns - the A's, etc. How close we got to the bar.

Q; How do reflect the effect of the actions and changes in terms of population significance? R: We can't quantitatively but do so qualitatively.

Q: How do you account for population responses to other program elements such as ERP? How do you reflect the uncertainties? How do that reflect into templates? We can see the human impacts clearly in terms of water supply and water quality impacts, but we can't see the biological impacts and benefits. R: We can see the biological benefits but we can't quantify them in terms of population responses. We can see how close we get to the bar so we can make assurances. But we (CT) can't agree on population effects. We recognize that by late Stage 1 there will be many positive population responses to other program actions such as improving habitats.

C: This discussion goes beyond the bounds of the WMS. CMARP is to make some of these connections.

C: We need to define these other program benefits in context with the potential benefits of the WMS including the EWA. We need to put the water aspect in context with the other stressors on fish and how we fit this in with the other boundaries of uncertainty such as toxics, predation, ocean conditions.

C: We should work our way up from the bottom rather than down from the top - we should start with small EWA efforts and test their effectiveness through adaptive management.

S: We should ask CT to report on this issue.

C: We are looking for continuous improvements in water supply and water quality along with the fish improvements.

C: We would like to see the water users baseline gamed with more water supply benefits. R: Putting another b(2) opinion on our table will simply bring the b(2) battle to our table.

C: We are only asking to consider discretionary aspects of the DOI b(2) position be included and evaluated. R: This would be a Policy decision and they have made this decision.

C: The yield loss from the b(2) actions in the limited gaming to date is much lower than expected - there should not be much concern on the part of the water users if that is the case.

IV. Work Plan for WMDT

C: The array of assumptions are not as broad as the water users would like them to be.

Q: Why has the financing plan been removed? It is a fundamental part of the WMP. How do you speak to allocation without a financing plan? Who pays needs to be considered all along the process.

C: CALFED needs to express what they want in a final recommendation. Economics and financing will affect decision just as engineering and biology will.

Q: Who is going to pay for damage to water supply and water quality? Part of financing decision.

R: We will have an asset evaluation by the end of the year and a financing evaluation next spring.

V. Decision Making - Governance

- By ROD at beginning of Stage 1 we will have assets and allocations developed.
- Stage 2 and 3 - WMS
- Environmental Assets - decision makers needed.
- WS reliability assets

C: Decisions to be made on asset allocation are needed by the ROD.

Q: What are CALFED's expectations on WS reliability? R: Sponsors will provide this. The goal is to have a package by the ROD that has risk sharing.

C: Need to figure out decision making structure.